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ABSTRACT

This paper describes trends in public elementary and secondary education in the United States. The data were obtained from the "Condition of Education" and the "Digest of Education Statistics," which are prepared annually by the National Center for Education Statistics. Information is presented on the following areas: enrollment, minority enrollment, preprimary education, student and family characteristics, public schools, pupil-teacher ratios and teacher salaries, principals' and teachers' perspectives on education, revenue and expenditures, mathematics performance, and international comparisons. The data project rising enrollments for elementary-secondary education, particularly among minority students, through the early 2000s. Other trends that have occurred since the 1970s are identified: (1) an increase in the number of single-parent homes and women participating in the work force; (2) increased school consolidation, which has resulted in changed school-grade structures and larger schools; (3) an increase in the number of teachers, but no decline in teacher-student ratios; (4) no increase in teacher salaries, when adjusted for inflation; (5) an increase in federal funding and a decrease in state funding; (6) a national increase in per-pupil expenditures for public elementary/secondary education over the past decade; (7) some improvements in mathematics proficiency; and (8) a high literacy assessment compared to other countries. Six figures are included. (LMI)

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Trends in Education

Public elementary and secondary school enrollment decreased between 1971 and 1984 because of a decline in the school-age population. Enrollment then began rising, reaching 42.2 million in the fall of 1992. This fall about 43.4 million children are expected to enter public schools, an increase of about 3 percent since last fall. The National Center for Education Statistics projects public school enrollment will hit an all-time record level of 46.5 million in 1997, and then continue increasing during the early 2000s.

Of these students, about 31.4 million children are expected to enter public elementary schools this fall, an increase of 17 percent since 1984. Public elementary enrollment is expected to continue rising, reaching an all-time high of about 32.6 million by 1996. This would be an increase of 4 percent over the 1993 level. During the late 1980s, enrollment trends differed for elementary and secondary schools, with increases in the lower grades and decreases in the upper grades. In the 1990s, however, enrollments rose at both the elementary and secondary school level.

The recent enrollment increases in the ninth to twelfth grades reflect the earlier increases in enrollments at the elementary school level. Increases in high school enrollment are expected for the rest of the decade resulting in a 19 percent rise in public secondary enrollment between 1993 and 2003.

Minority Enrollment

Children from minority backgrounds continue to enter elementary public and private schools in large numbers. Even during the years of enrollment declines between 1972 and 1984, the number of minority children in elementary school rose by 9 percent while the enrollment of white children fell by 21 percent.

From 1984 to 1991, while elementary public and private school enrollment rose by 11 percent, white enrollment increased by only 5 percent. Hispanic enrollment jumped by 45 percent, other minorities (Asian/Pacific Islander and American Indian) rose by 28 percent, and black enrollment by 17 percent. By 1991, minority children made up 31 percent of elementary school enrollment, with blacks accounting for 16 percent, Hispanics for 11 percent, and other minorities (Asian/Pacific Islanders and American Indians) for 4 percent.

This trend of increasing numbers and proportions of minority students is expected to continue into the foreseeable future, due to higher fertility rates of minority women and minority immigration. Between 1992 and 2000, the number of white children under age 5 is expected to decline 10 percent, while the number of black children under 5 is expected to rise by 1 percent and the number of Hispanic children by 15 percent. By 2000, the U.S. is expected to have more Hispanic children under age 5 than black children.

The number of elementary school-age children (5 to 13) is expected to rise between 1992 and 2000, with the number of white children increasing by 3 percent. The number of black 5- to 13-year-olds is expected to rise by 15 percent and Hispanic children by 28 percent. Although their population sizes are somewhat smaller than the other groups, the numbers of Asian or Pacific Islanders and American Indian/Alaskan Native children are expected to grow at an even more rapid rate. The growth rate for the Hispanic population is expected to continue to exceed that of the white and black populations, and by 2005, Hispanics are expected to be the largest minority group among school-age children.

Preprimary Education

School enrollments at the preprimary level grew rapidly during the 1970s and 1980s as both the number and attendance rates of three- to five-year-olds rose. Between 1980 and 1985, the number of children in preprimary programs increased 20 percent to 5.9 million. From 1985 to 1992 it climbed an additional 9 percent. The proportion of children in full-day programs also increased in the 1970s and 1980s, and in 1992 about 38 percent of children enrolled in preprimary programs attended full-day sessions. In the past few years, preprimary enrollment rates have been relatively stable.

Student and Family Characteristics

One contributing factor to the increase in the rises in preschool enrollment is the rise in the employment rate of women with young children. In 1991, 60 percent of all married women with children under six were in the labor force, compared to 45 percent in 1980 and 30 percent in 1970. This increase in mothers' participation in the workforce highlights the evolution of family work patterns. In the typical family with children in 1975, only the father was employed. In 1991, the pattern was substantially different. Only in 32 percent of families with children, was just the father employed. In 59 percent of the families, both parents worked and in 5 percent of the families only the mother worked.

The proportion of young children from single-parent families has remained at high levels in recent years. During the 1970s, the proportion of children from single-parent families rose from 11 to 19 percent. The proportion of children living with only one parent continued to rise during the 1980s, reaching 23 percent in 1991. The percentages were somewhat higher for minority children, with 57 percent of black children and 27 percent of Hispanic children living in single parent families compared to 17 percent of white children.

Children in single-parent homes are about five times more likely to be impoverished than children with both parents in the home. The proportion of children in poverty rose from 15 percent in 1970 to 22 percent in 1983. After declining during the mid-1980s, the poverty rate for children rose from 19 percent in 1989 to 21 percent in 1991.

Public Schools

Over the past decades, the trend to consolidate small schools has brought a steady decline in the total number of public schools in the U.S. In 1930, there were more than 247,000 schools compared with only 85,000 today. This process of school consolidation is still continuing, with school grade structures evolving and school size growing.

There have been some significant shifts in the structure of public school systems in recent years. The number of elementary schools dropped 11 percent to 57,000 between 1970-71 and 1984-85, but rose by about 4 percent by 1991-92. Middle schools accounted for a disproportionate share of this increase, rising by 28 percent between 1984-85 and 1991-92. Meanwhile, the number of junior high schools declined by 27 percent. During this 1984-85 to 1991-92 period, the proportion of elementary schools with traditional 1-6 and 1-8 grade spans dropped and the proportion of those with formerly atypical 1-5 grade spans rose.

The number of elementary schools has not increased as fast as enrollment and average school size has risen. Elementary schools grew from an average of 403 students in 1984-85 to 458 in 1991-92. Only about 16 percent of elementary schools enroll more than 700 students, but these schools enroll nearly one in three elementary school students. About an equal percent of schools enroll less than 200 students, but these schools enroll only 4 percent of the students. The average size of elementary schools varies widely from 156 in Nebraska and 181 in Montana to 601 in California and 745 in Florida. Most of the smaller schools are in predominantly rural states, while those with the largest enrollments are in states with large urban populations.

Teachers

This fall, the number of public school teachers is expected to reach an all-time high of 2.5 million, and is projected to rise an additional 18 percent by 2003. The number of public elementary school teachers is expected to increase from 1.5 million in 1993 to 1.7 million in 2003.

Despite the increasing number of teachers in the past few years, there has been no downward trend in pupil-teacher ratios in public elementary schools. This is because school enrollment has risen at approximately the same rate. This fall, the ratio for public elementary schools is expected to be about 19 pupils per teacher. However, the pupil-teacher ratio does not directly reflect class sizes, partly because of the number of specialty teachers. In 1990-91, the average class size for teachers in public elementary schools was 24 compared to 26 for teachers in secondary schools. This is only about 1 student per class smaller than in the mid-1970s. Because of the increased number of specialty teachers, the decline in the pupil-teacher ratio over this period has not resulted in substantial reductions in average class size.

The average salary for teachers rose significantly during the 1980s, partly as a result of increased experience and education, and partly as a result of increases in teacher salary schedules. This rise allowed teachers to regain the purchasing power they had lost during the 1970s, when the real value of their salaries fell by 13 percent. By 1989-90, the average salary for a classroom teacher had reached $31,391--a gain of 20 percent from 1979-80 after adjustment for inflation. However, there was no increase in teacher salaries from 1990-91 and 1992-93, after adjusting for inflation.

In 1990-91, the average salary for public school principals was $49,603, compared to the average of $33,578 for teachers. State average salaries for public school principals ranged widely from highs of $66,685 in Connecticut and $64,496 in New Jersey to lows of $32,273 in North Dakota and $32,864 in South Dakota. As might be expected, salaries in states with large urbanized areas tended to be higher than states that were predominantly rural.

Principal and Teacher Perspectives on Education

These is a large amount of agreement among principals and teachers about the primary goals for elementary education. More than half of both elementary teachers and principals agree that basic literacy skills are the most important goals for elementary education. Sizeable percentages of principals cited academic excellence and personal growth. The second and third goals most frequently cited by elementary school teachers were personal growth and good work habits.

Elementary school teachers most frequently mentioned "lack of parental involvement and "poverty" as serious problems in their schools. Large numbers of elementary school principals also felt that these were serious problems. The other problems that were felt to be serious by more than 10 percent of the teachers were "student apathy," "parental substance abuse," and "student disrespect for teachers." As a group, elementary school teachers cited fewer items as major problems than secondary school teachers.

More than half of elementary school principals felt that they had a "great deal" of influence on hiring teachers and setting discipline policy. School boards also played an important role in these decisions, with about 30 percent of the principals saying the district boards had a "great deal" of influence on hiring teachers and 38 percent feeling that they had a "great deal" of influence on setting discipline policies. While about 35 percent of the principals felt that teachers had a "great deal" of influence on setting discipline policies, only 6 percent felt that they had the same level of influence on hiring other teachers. There appeared to be wider variety of influences on establishing curriculums. One-third of the principals said that the state board had a "great deal" of influence and 23 percent said that the district boards had a "great deal" of

influence. Sizeable proportions of principals said that they (21 percent) and their teachers (25 percent) had a "great deal" of influence on curriculum matters. Relatively few principals felt that parent associations had a "great deal" of influence on any of these school matters.

Revenue

During the late 1970s, state revenues became the primary source of public school funding, surpassing local revenues. This trend has begun to reverse in recent years. Between 1986-87 and 1990-91, the proportion of funds from state governments fell, while the proportion from local governments rose from 43.9 to 46.5 percent. In 1990-91, the proportion from the federal government increased very slightly for the first time since 1979-80.

Between fiscal years 1990 and 1993, funding for major programs administered by the U.S. government for elementary and secondary education increased 29 percent, after adjustment for inflation. Programs for other levels of education increased by less than 13 percent. In fiscal year 1993, the Department of Education will distribute an estimated $13.8 billion for elementary and secondary education. The largest program, Grants for the Educational Disadvantaged (Chapter 1) accounts for half of the total. This program served about 17 percent of public elementary school children in 1990-91, including about 32 percent of children in schools with high minority concentrations. About 6 percent of private elementary school children participate in Chapter 1 programs.

The Department of Education provides less than half of all federal funding for elementary and secondary education. Other major federal programs include the Department of Agriculture's child nutrition programs ($6.8 billion) and the Department of Health and Human Services' Head Start program ($2.8 billion). The Head Start program has increased particularly rapidly in recent years, up 73 percent since 1990, after adjustment for inflation. In 1990-91, the Department of Agriculture provided free or reduced-price lunches for more than one-third of all public elementary school children and more than half of children in urban schools.

Expenditures

The United States has increased its per-pupil current expenditure for public elementary and secondary schools substantially over the past 10 years reaching an all-time high of $5,372 in 1992-93.

Although increases in per-pupil spending have varied widely across the country, all but nine states had some increases between 1987-88 and 1992-93, even after adjustment for inflation. However, increases in the last part of the period have been limited. Overall, between 1987-88 and 1992-93, fifteen states had increases of 10 percent or more, led by New Hampshire, North Carolina, Ohio, and Illinois. Four states, Alaska Wyoming, Minnesota, and Arkansas, and the District of Columbia had declines of over five percent.

Mathematics

Results from assessments of mathematics proficiency indicate that students have made some improvements. Nine-year-olds improved on both basic and more advanced skills between 1977-78 and 1989-90. Between 1989-90 and 1991-92, the percent of 4th graders able to perform at the basic and proficient levels rose. The gap between white, black, and Hispanic youngsters did not narrow during this period, with the performance of white students increasing and that of minority students remaining about the same.

The performance of 13-year-olds also rose between 1977-78 and 1989-90 and particularly large improvements were made by minority children. The latter 1991-

92 assessment for 8th graders show similar results as the assessment for 4th graders. Overall, a larger proportion of students successfully performed basic and proficient skills compared to 1989-90, but the performance of minority students remained unchanged.

Performance in different types of communities varied widely. At the 4th grade level, 81 percent of the advantaged suburban and urban students were able to perform at a basic level compared to only 27 percent of those in disadvantaged suburban and urban areas. About 60 percent of the students in extreme rural areas performed at this level, which was about the same as most other students who lived in small towns or were not in disadvantaged or advantaged suburban or urban settings. This pattern was very much the same among 8th grade students.

The 1991-92 study of mathematics performance also found that proficiency varied widely among the 41 states and the District of Columbia which participated in the program. At grade 4, the percentage of students performing at the basic level or higher ranged from 25 in the lowest state to 76 percent in the highest. The range of performance of 8th graders at a basic level was even wider, from 13 to 82 percent. The states with the highest mathematics proficiency at grade 4 were Maine, Iowa, New Hampshire, Wisconsin, North Dakota, Minnesota, New Jersey, Connecticut, Massachusetts, and Nebraska. The 8th grade students with the highest averages were from Iowa, North Dakota, Minnesota, Maine, New Hampshire, Wisconsin, and Nebraska.

International Comparisons

Recent reports on international tests of mathematics and science have highlighted the relatively low level of achievement of U.S. students. A 1990 science assessment of 9-year-olds in 10 different countries found that U.S. students scored lower than those of Korean students, but about the same as students from 5 other countries. The U.S. 13-year-olds scored below students in 4 other countries, higher than 1 other country and about the same as 9 other countries. U.S. students seemed to perform less well in the mathematics assessment. The U.S. 9-year-olds had averages that were below 5 of 10 countries that participated in the mathematics assessment and 13 year-olds placed below 11 out of 15 countries.

In contrast to the middling performance on mathematics and science, a new report documents the high performance of U.S. students on a literacy assessment. Nine-year-olds from the U.S. scored higher than their peers in 25 other countries. Only Finland scored higher than the U.S. U.S. 14-year-olds also scored well, lower than Finland, France, and Sweden, but about the same as 9 other countries and above 18 others.

Recent studies have examined the reasons for differences in performance from country to country. While the evidence has not been conclusive, some reasons have been discounted. Students from countries with longer school years did not necessarily score higher. Television watching did not account for differences in scores from country to country. Longer hours of homework also did not consistently result in higher scores across countries. Researchers are pointing to curriculum differences to help explain the gaps in performance scores. For example, the high U.S. literacy scores may reflect the relatively large amount of instructional time devoted to reading and writing in our elementary schools. Scores on mathematics and science exams for U.S. students may be depressed because they have not had the opportunity to learn more advanced material. Differences in performance averages from country to country, and among our states, suggest a potential benefit from more exchanges of information on instructional practices and curriculum materials.

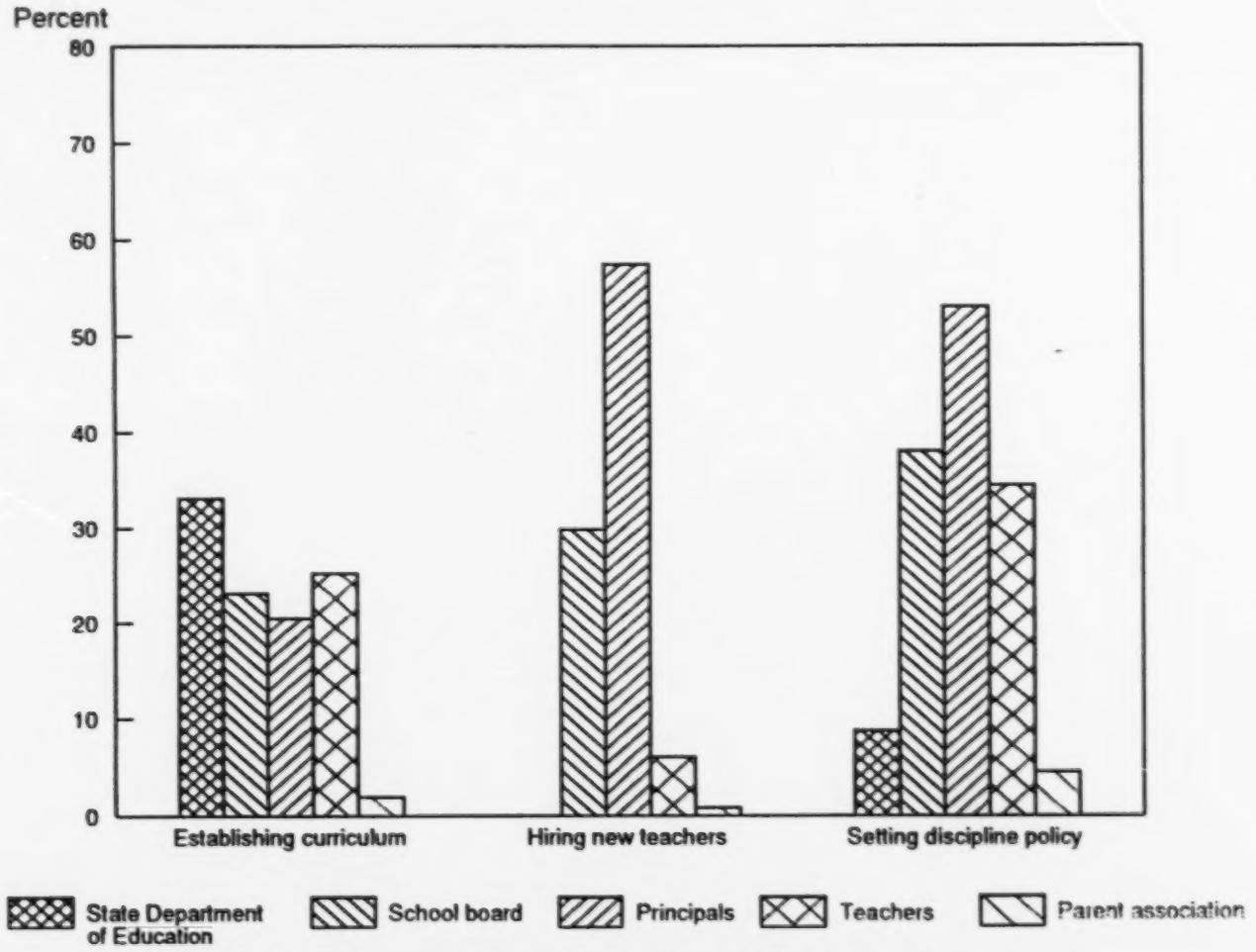
Thomas D. Snyder is chief of the Compilations and Special Studies Branch in the U.S. Department of Education's National Center for Education Statistics. The

data in this article were derived from surveys and projections of the National Center for Education Statistics and the Bureau of the Census. Comparisons of the sample survey data are statistically significant at a 95 percent confidence level.

For Further Information:

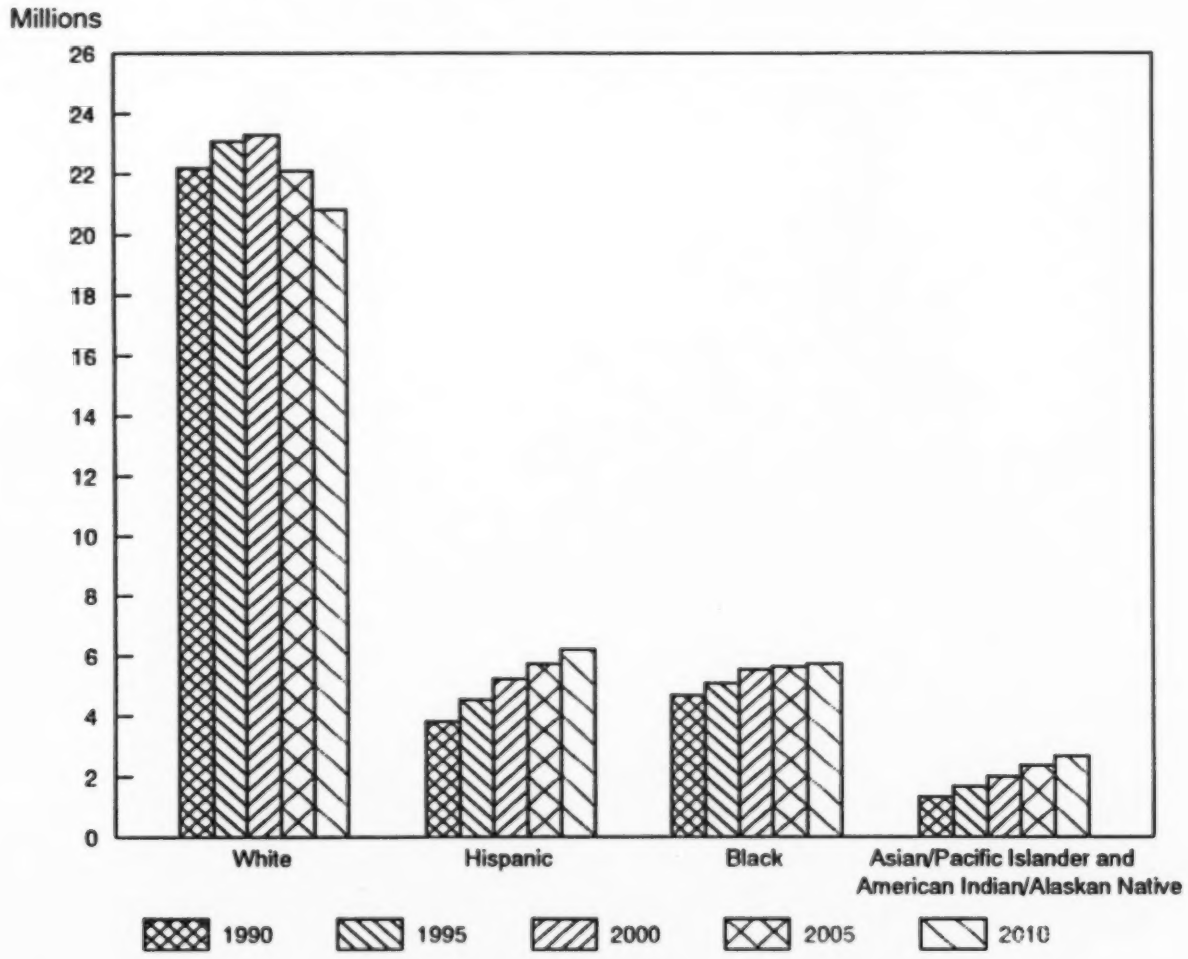
More detailed statistics on education are available from the Condition of Education and the Digest of Education Statistics, which are prepared annually by the National Center for Education Statistics, and are available from the Government Printing Office, Washington, D.C. 20402.

Percent of elementary school principals who feel that school groups have a "great deal" of influence on school decision making: 1990-91



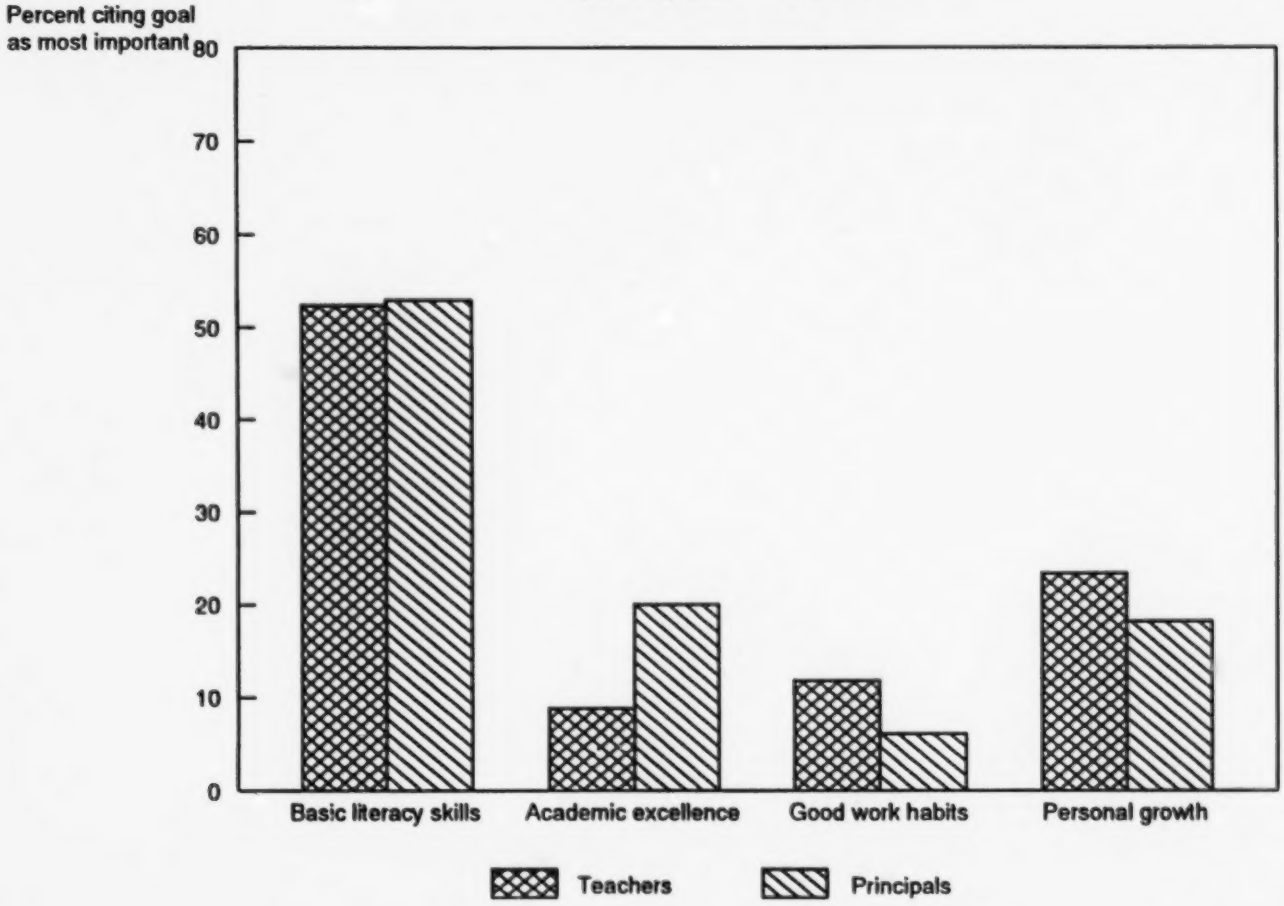
SOURCE: U.S. Department of Education, National Center for Education Statistics.

Number of 5- to 13-year-olds, by race/ethnicity: 1990 to 2010



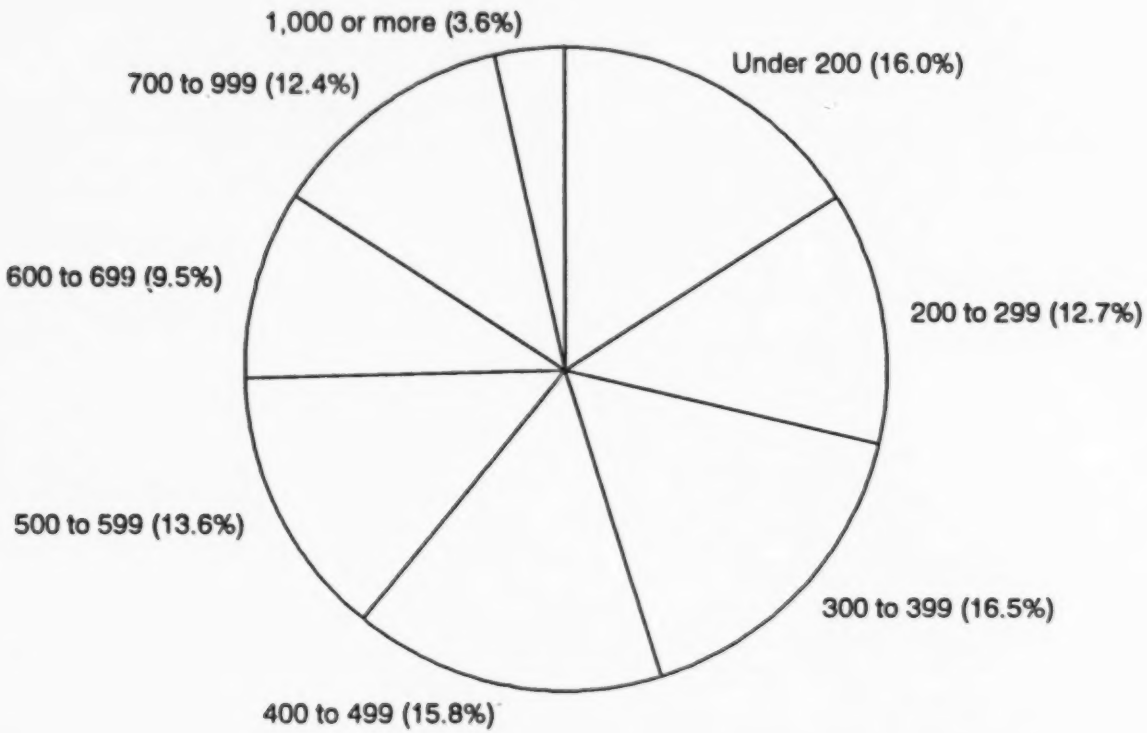
SOURCE: U.S. Department of Commerce, Bureau of the Census.

Most important educational goals cited by elementary school teachers and principals: 1990-91



SOURCE: U.S. Department of Education, National Center for Education Statistics.

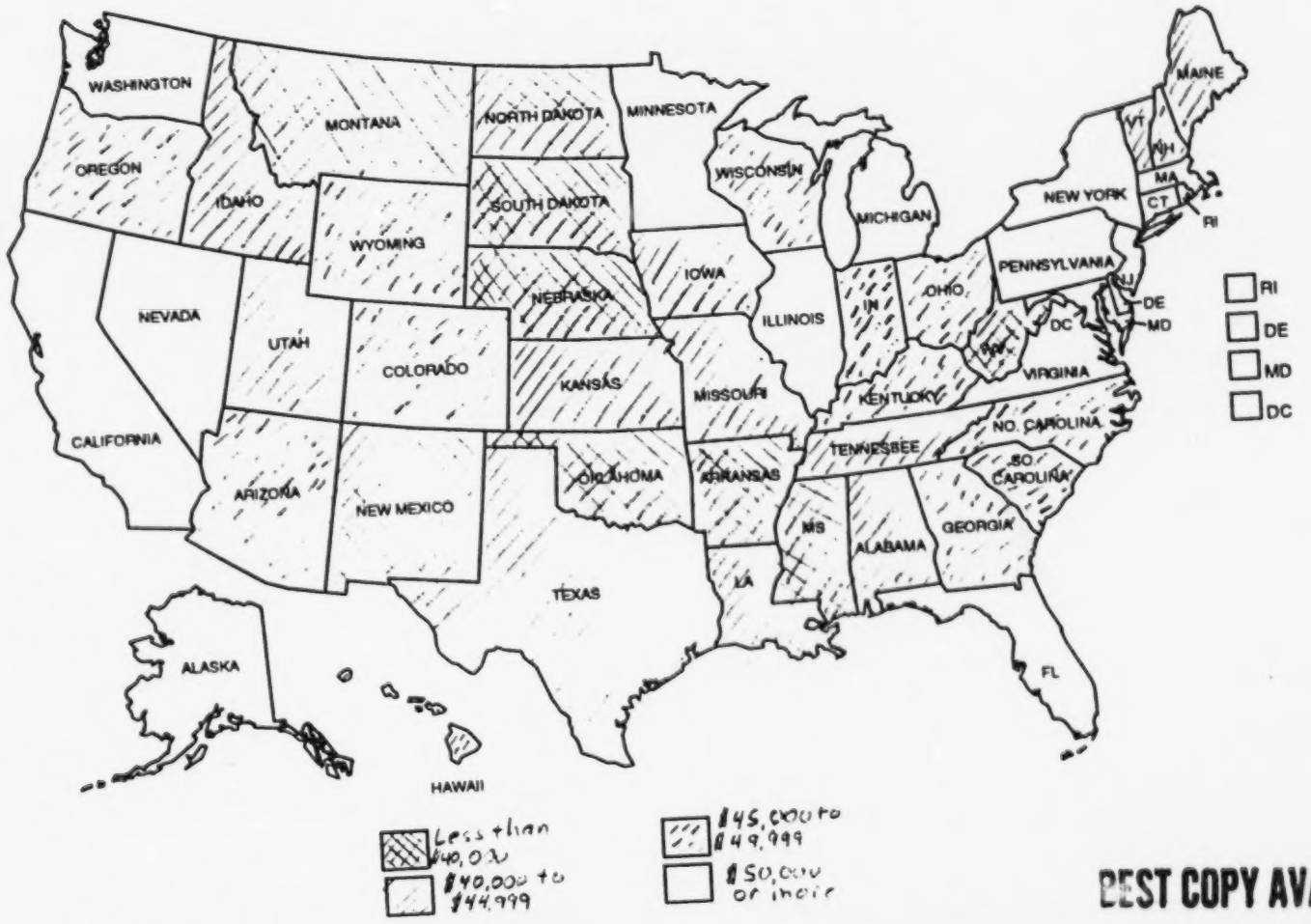
Enrollment size of public elementary schools: 1991-92



Average enrollment size = 458 students

SOURCE: U.S. Department of Education, National Center for Education Statistics.

Average annual salary of public school principals: 1990-91



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SOURCE: U.S. Department of Education, National Center for Education Statistics

Percent change in current expenditure per student in public schools: 1987-88 to 1992-93

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SOURCE: U.S. Department of Education, National Center for Education Statistics.